

Use Attainability Analysis

for

WBID 0706 Auxvasse Creek

Submitted by
SES, Inc.

To
Missouri Department of Natural Resources
Water Protection Program

Date Received: September 10, 2007

Field Data Sheets for Recreation Use Stream Surveys
Data Sheet A - Water Body Identification
(For water body being surveyed)

Water Body Information

Water Body Name:	Auxvasse Creek	WBID:	706						
8 digit HUC code:	10300102	County:	Callaway						
Upstream Legal Description	T49N	R10W	Sec 22						
Downstream Legal Description	T46N	R8W	Sec 8						
Number of Sites Evaluated	9								
List all site numbers, listed upstream to downstream	1	2	3	4	5	6	7	8	9

Discharger Facility Information

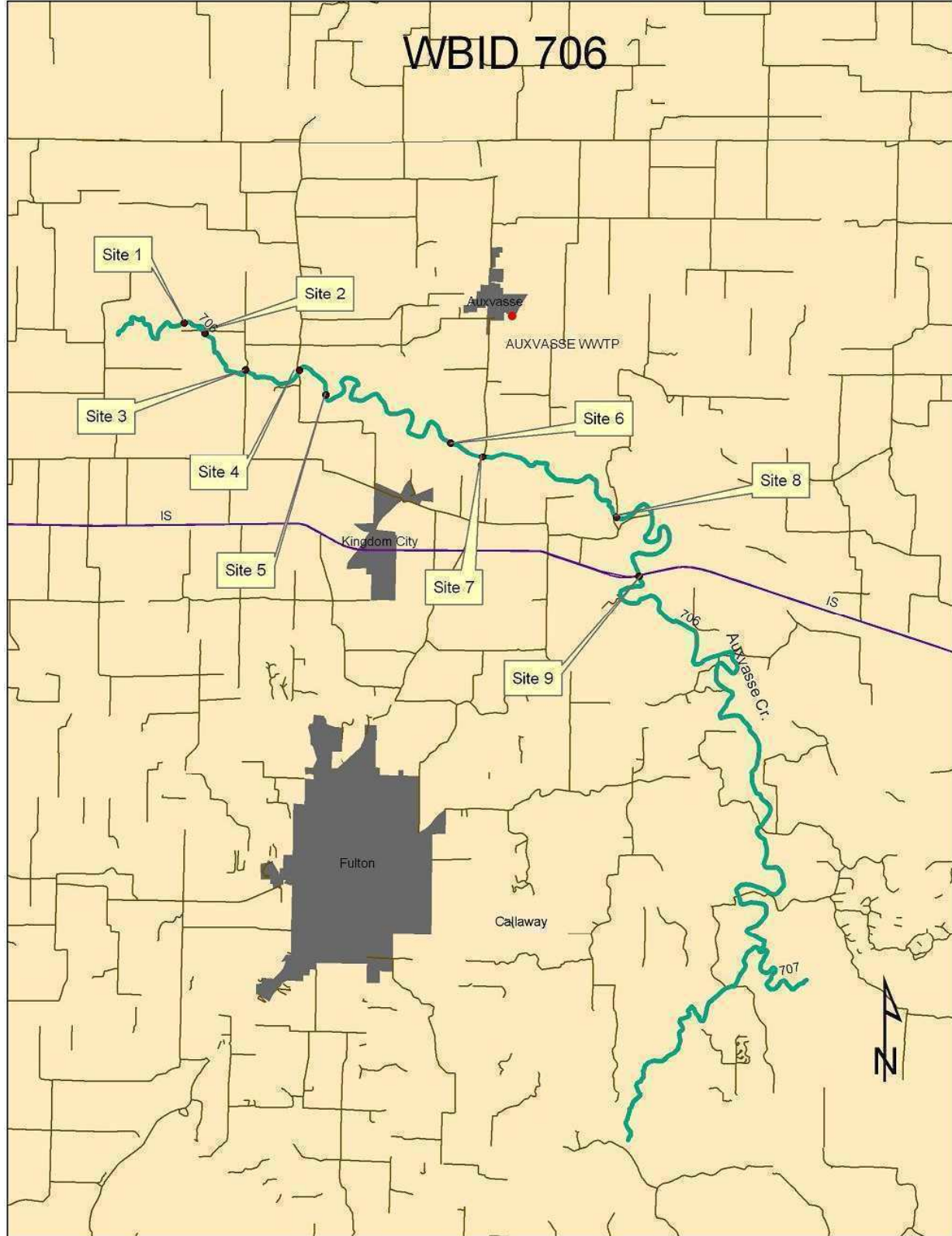
Discharger Facility Name(s):	Auxvasse WWTP
Discharger Permit Number(s):	MO0100986

UAA Surveyor

Name of Surveyor:	Gilisa Gould	Telephone Number:	913.307.0046
Organization/Employer:	SES, Inc.		
Position:	Field Team Leader		

Signed: _____ Date: _____

WBID 706



Field Data Sheets for Recreational Use Stream Surveys
Data Sheet B - Site Characterization
(must be completed for each site)

WBID 706
 Site # 1

Date and Time: 8.31.07 8:40AM

Current Weather Conditions fair

Weather Conditions for Past 10 days: 0.88 inches of precip was the max

Drought Conditions? No

Site Location (e.g. road crossing) Hwy M

GPS Mark: 123

Upstream Photo 33 Downstream Photo 34

Uses Observed (Uses actually observed at time of survey) Circle

Swimming	Skin Diving	SCUBA diving	Tubing
Water Skiing	Wind Surfing	Kayaking	Boating
Wading	Rafting	Hunting	Trapping
Fishing	<u>None of the Above</u>	Other	

Surrounding Conditions

City/county parks	Playgrounds	MDC conservation lands	Urban areas
Campgrounds	Boating accesses	State parks	National Forests
Nature trails	Stairs/walkway	No trespass sign	Fence
Steep slopes	<u>None of the Above</u>	Other	

Indications of Human Use

Roads	Rope swings	Foot paths/prints	Dock/platform
Livestock Watering	RV/ATV Tracks	Camping Sites	Fire pit/ring
NPDES Discharge	Fishing Tackle	<u>Other:</u>	<u>rifle found in stream</u>

WBID # 706 **Site #** 1
Mark # 123 **Dissolved Oxygen (ppm)** 6.9
Upstream Views Physical Dimensions: Is there any water present at this view? yes

If so, is there an obvious current? no

Select one of the following channel features:

	% of Channel Feature				
Riffle	27				
Run	0				
Pool	63				

Downstream View's Physical Dimensions: Is there any water present at this view? yes

If so, is there an obvious current? no

Substrate:

50% Cobble	23% Gravel	14% Sand	13% Silt
% Mud/Clay	% Bedrock		

Aquatic Vegetation: (Note amount of vegetation or algal growth at the assessment site)

80% small willow in stream

Water Characteristics

Odor	Sewage	Musky	Chemical	<u>None</u>	Other
Color	Clear	<u>Green</u>	Gray	Milky	<u>Other</u> <u>murky</u>
Bottom Deposit	Sludge	Solids	<u>Fine Sed.</u>	None	Other
Surface Deposit	<u>Oil</u>	<u>Scum</u>	Foam	None	Other

Data Sheet C: Cross-Sectional Depth Measurements (for estimation of median depth)
(Median Depth Shown in Bold)

Site # 1

Mark # 123

WBID # 706

0706_Auxvasse Creek_Cal

	Depth (m)
Transect 1	0.05
Substrate:	0.10
cobbly silt	0.15
Water Clarity:	0.15
clear	0.15
Channel Feature:	0.15
pool	0.10
Channel Width:	0.05
6 yards	0.05
0.10	0.00
Transect 2	0.15
Substrate:	0.15
cobbly silt	0.15
Water Clarity:	0.15
clear	0.10
Channel Feature:	0.05
pool	0.05
Channel Width:	0.00
8 yards	0.00
0.08	0.00
Transect 3	0.05
Substrate:	0.20
cobbly silt	0.20
Water Clarity:	0.15
clear	0.10
Channel Feature:	0.05
pool	0.05
Channel Width:	0.05
8 yards	0.05
0.05	0.00
Transect 4	0.00
Substrate:	0.00
cobble	0.00
Water Clarity:	0.00
N/A	0.00
Channel Feature:	0.00
riffle	0.00
Channel Width:	0.00
9 yards	0.00
0.00	0.00

	Depth (m)
Transect 5	0.00
Substrate:	0.00
cobbly gravel	0.00
Water Clarity:	0.00
N/A	0.00
Channel Feature:	0.00
riffle	0.00
Channel Width:	0.00
3 yards	0.00
0.00	0.00
Transect 6	0.00
Substrate:	0.00
cobbly gravel	0.05
Water Clarity:	0.05
clear	0.05
Channel Feature:	0.05
pool	0.05
Channel Width:	0.05
5 yards	0.05
0.05	0.00
Transect 7	0.00
Substrate:	0.05
cobbly gravel	0.00
Water Clarity:	0.05
clear	0.10
Channel Feature:	0.15
pool	0.15
Channel Width:	0.15
8 yards	0.20
0.13	0.15
Transect 8	0.00
Substrate:	0.05
gravelly silt	0.05
Water Clarity:	0.10
clear	0.20
Channel Feature:	0.20
pool	0.15
Channel Width:	0.15
10 yards	0.15
0.13	0.10

	Depth (m)
Transect 9	0.05
Substrate:	0.05
gravelly silt	0.10
Water Clarity:	0.15
murky	0.25
Channel Feature:	0.30
pool	0.25
Channel Width:	0.20
13 yards	0.15
0.15	0.00
Transect 10	0.00
Substrate:	0.05
cobbly silt	0.05
Water Clarity:	0.15
murky	0.20
Channel Feature:	0.20
pool	0.15
Channel Width:	0.10
6 yards	0.05
0.08	0.00
Transect 11	0.00
Substrate:	0.00
cobble	0.00
Water Clarity:	0.00
N/A	0.00
Channel Feature:	0.00
riffle	0.00
Channel Width:	0.00
7 yards	0.00
0.00	0.00

Site Median	Site Maximum
0.05	0.30

Field Data Sheets for Recreational Use Stream Surveys
Data Sheet B - Site Characterization
(must be completed for each site)

WBID 706
 Site # 2

Date and Time: 8.31.07 9:30AM

Current Weather Conditions fair

Weather Conditions for Past 10 days: 0.88 inches of precip was the max

Drought Conditions? No

Site Location (e.g. road crossing) Hwy 264

GPS Mark: 124

Upstream Photo 35 Downstream Photo 36

Uses Observed (Uses actually observed at time of survey) Circle

Swimming	Skin Diving	SCUBA diving	Tubing
Water Skiing	Wind Surfing	Kayaking	Boating
Wading	Rafting	Hunting	Trapping
Fishing	<u>None of the Above</u>	Other	

Surrounding Conditions

City/county parks	Playgrounds	MDC conservation lands	Urban areas
Campgrounds	Boating accesses	State parks	National Forests
Nature trails	Stairs/walkway	No trespass sign	<u>Fence</u> <u>both parallel to</u> <u>and across stream</u>
Steep slopes	None of the Above	<u>Other</u>	<u>pasture</u>

Indications of Human Use

Roads	Rope swings	Foot paths/prints	Dock/platform
<u>Livestock Watering</u> <u>Pic #37</u>	RV/ATV Tracks	Camping Sites	Fire pit/ring
NPDES Discharge	Fishing Tackle	Other:	

WBID # 706 **Site #** 2
Mark # 124 **Dissolved Oxygen (ppm)** N/A
Upstream Views Physical Dimensions: Is there any water present at this view? no

If so, is there an obvious current?

Select one of the following channel features:

	% of Channel Feature				
Riffle	91				
Run	9				
Pool	0				

Downstream View's Physical Dimensions: Is there any water present at this view? no

If so, is there an obvious current?

Substrate:

50% Cobble	41% Gravel	% Sand	% Silt
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% Mud/Clay	9% Bedrock
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Aquatic Vegetation: (Note amount of vegetation or algal growth at the assessment site)

none

Water Characteristics **N/A**

Odor	Sewage	Musky	Chemical	None	Other
Color	Clear	Green	Gray	Milky	Other
Bottom Deposit	Sludge	Solids	Fine Sed.	None	Other
Surface Deposit	Oil	Scum	Foam	None	Other

Data Sheet C: Cross-Sectional Depth Measurements (for estimation of median depth)
(Median Depth Shown in Bold)

Site # 2

Mark # 124

WBID # 706

0706_Auxv

	Depth (m)
Transect 1	0.00
Substrate:	0.00
gravel	0.00
Water Clarity:	0.00
N/A	0.00
Channel Feature:	0.00
run	0.00
Channel Width:	0.00
9 yards	0.00
0.00	0.00
Transect 2	0.00
Substrate:	0.00
cobbly gravel	0.00
Water Clarity:	0.00
N/A	0.00
Channel Feature:	0.00
riffle	0.00
Channel Width:	0.00
37 yards	0.00
0.00	0.00
Transect 3	0.00
Substrate:	0.00
cobbly gravel	0.00
Water Clarity:	0.00
N/A	0.00
Channel Feature:	0.00
riffle	0.00
Channel Width:	0.00
32 yards	0.00
0.00	0.00
Transect 4	0.00
Substrate:	0.00
cobbly gravel	0.00
Water Clarity:	0.00
N/A	0.00
Channel Feature:	0.00
riffle	0.00
Channel Width:	0.00
23 yards	0.00
0.00	0.00

	Depth (m)
Transect 5	0.00
Substrate:	0.00
cobbly gravel	0.00
Water Clarity:	0.00
N/A	0.00
Channel Feature:	0.00
riffle	0.00
Channel Width:	0.00
17 yards	0.00
0.00	0.00
Transect 6	0.00
Substrate:	0.00
cobbly gravel	0.00
Water Clarity:	0.00
N/A	0.00
Channel Feature:	0.00
riffle	0.00
Channel Width:	0.00
17 yards	0.00
0.00	0.00
Transect 7	0.00
Substrate:	0.00
cobbly gravel	0.00
Water Clarity:	0.00
N/A	0.00
Channel Feature:	0.00
riffle	0.00
Channel Width:	0.00
15 yards	0.00
0.00	0.00
Transect 8	0.00
Substrate:	0.00
cobbly gravel	0.00
Water Clarity:	0.00
N/A	0.00
Channel Feature:	0.00
riffle	0.00
Channel Width:	0.00
15 yards	0.00
0.00	0.00

	Depth (m)
Transect 9	0.00
Substrate:	0.00
cobble	0.00
Water Clarity:	0.00
N/A	0.00
Channel Feature:	0.00
riffle	0.00
Channel Width:	0.00
13 yards	0.00
0.00	0.00
Transect 10	0.00
Substrate:	0.00
cobbly bedrock	0.00
Water Clarity:	0.00
N/A	0.00
Channel Feature:	0.00
riffle	0.00
Channel Width:	0.00
7 yards	0.00
0.00	0.00
Transect 11	0.00
Substrate:	0.00
cobbly bedrock	0.00
Water Clarity:	0.00
N/A	0.00
Channel Feature:	0.00
riffle	0.00
Channel Width:	0.00
11 yards	0.00
0.00	0.00
Site Median	0.00
Site Maximum	0.00

Field Data Sheets for Recreational Use Stream Surveys
Data Sheet B - Site Characterization
(must be completed for each site)

WBID 706
 Site # 3

Date and Time: 8.31.07 9:56

Current Weather Conditions fair

Weather Conditions for Past 10 days: 0.88 inches of precip was the max

Drought Conditions? No

Site Location (e.g. road crossing) county road 231

GPS Mark: 125

Upstream Photo 38 Downstream Photo 39

Uses Observed (Uses actually observed at time of survey) Circle

Swimming	Skin Diving	SCUBA diving	Tubing
Water Skiing	Wind Surfing	Kayaking	Boating
Wading	Rafting	Hunting	Trapping
Fishing	<u>None of the Above</u>	Other	

Surrounding Conditions

City/county parks	Playgrounds	MDC conservation lands	Urban areas
Campgrounds	Boating accesses	State parks	National Forests
Nature trails	Stairs/walkway	No trespass sign	<u>Fence: across stream</u>
<u>Steep slopes</u>	None of the Above	Other	

Indications of Human Use

Roads	Rope swings	Foot paths/prints	Dock/platform
Livestock Watering	RV/ATV Tracks	Camping Sites	Fire pit/ring
NPDES Discharge	Fishing Tackle	<u>Other:</u>	<u>shown in Pic#39</u>

WBID #	706	Site #	3
Mark #	125	Dissolved Oxygen (ppm)	4.8
Upstream Views	Physical Dimensions: Is there any water present at this view? yes		

If so, is there an obvious current? no

Select one of the following channel features:

% of Channel Feature

Riffle	82				
Run					
Pool	18				

Downstream View's Physical Dimensions: Is there any water present at this view? yes

If so, is there an obvious current? no

Substrate:

77% Cobble	18% Gravel	5% Sand	% Silt
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% Mud/Clay	% Bedrock
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Aquatic Vegetation: (Note amount of vegetation or algal growth at the assessment site)

none

Water Characteristics

Odor Sewage Musky Chemical **None** Other

Color	Clear	Green	Gray	Milky	<u>Other</u>	<u>murky, brown</u>
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Bottom Deposit	Sludge	Solids	Fine Sed.	<u>None</u>	Other
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Surface Deposit	Oil	Scum	Foam	<u>None</u>	Other
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Data Sheet C: Cross-Sectional Depth Measurements (for estimation of median depth)
(Median Depth Shown in Bold)

Site # 3 Mark # 125 WBID # 706

Depth (m)		Depth (m)		Depth (m)	
Transect 1	0.00	Transect 5	0.00	Transect 9	0.00
Substrate:	0.15	Substrate:	0.00	Substrate:	0.00
cobble	0.40	cobble	0.00	cobble	0.00
Water Clarity:	0.55	Water Clarity:	0.00	Water Clarity:	0.00
murky	0.65	N/A	0.00	N/A	0.00
Channel Feature:	0.60	Channel Feature:	0.00	Channel Feature:	0.00
pool	0.45	riffle	0.00	riffle	0.00
Channel Width:	0.25	Channel Width:	0.00	Channel Width:	0.00
8 yards	0.10	10 yards	0.00	11 yards	0.00
0.33	0.00	0.00	0.00	0.00	0.00
Transect 2	0.00	Transect 6	0.00	Transect 10	0.00
Substrate:	0.00	Substrate:	0.00	Substrate:	0.00
cobble	0.00	sandy gravel	0.00	cobble	0.00
Water Clarity:	0.00	Water Clarity:	0.00	Water Clarity:	0.00
N/A	0.00	N/A	0.00	N/A	0.00
Channel Feature:	0.00	Channel Feature:	0.00	Channel Feature:	0.00
riffle	0.00	riffle	0.00	riffle	0.00
Channel Width:	0.00	Channel Width:	0.00	Channel Width:	0.00
7 yards	0.00	18 yards	0.00	9 yards	0.00
0.00	0.00	0.00	0.00	0.00	0.00
Transect 3	0.00	Transect 7	0.00	Transect 11	0.00
Substrate:	0.00	Substrate:	0.00	Substrate:	0.05
cobbly gravel	0.00	gravelly cobble	0.00	cobble	0.05
Water Clarity:	0.00	Water Clarity:	0.00	Water Clarity:	0.05
N/A	0.00	N/A	0.00	N/A	0.05
Channel Feature:	0.00	Channel Feature:	0.00	Channel Feature:	0.00
riffle	0.00	riffle	0.00	riffle	0.10
Channel Width:	0.00	Channel Width:	0.00	Channel Width:	0.06
8 yards	0.00	9 yards	0.00	6 yards	0.05
0.00	0.00	0.00	0.00	0.05	0.00
Transect 4	0.00	Transect 8	0.00	Site Median	Site Maximum
Substrate:	0.00	Substrate:	0.00	0.00	0.65
cobbly gravel	0.00	cobble	0.00		
Water Clarity:	0.00	Water Clarity:	0.00		
N/A	0.00	N/A	0.00		
Channel Feature:	0.00	Channel Feature:	0.00		
riffle	0.00	riffle	0.00		
Channel Width:	0.00	Channel Width:	0.00		
9 yards	0.00	8 yards	0.00		
0.00	0.00	0.00	0.00		

Field Data Sheets for Recreational Use Stream Surveys
Data Sheet B - Site Characterization
(must be completed for each site)

WBID 706
 Site # 4

Date and Time: 08.31.07 11:00AM

Current Weather Conditions sunny/fair

Weather Conditions for Past 10 days: 0.88 inches of precip was the max

Drought Conditions? No

Site Location (e.g. road crossing) Hwy FF

GPS Mark: 126

Upstream Photo 40 Downstream Photo 41

Uses Observed (Uses actually observed at time of survey) Circle

Swimming	Skin Diving	SCUBA diving	Tubing
Water Skiing	Wind Surfing	Kayaking	Boating
Wading	Rafting	Hunting	Trapping
Fishing	<u>None of the Above</u>	Other	

Surrounding Conditions

City/county parks	Playgrounds	MDC conservation lands	Urban areas
Campgrounds	Boating accesses	State parks	National Forests
Nature trails	Stairs/walkway	No trespass sign	Fence
Steep slopes	<u>None of the Above</u>	Other	

Indications of Human Use

Roads	Rope swings	Foot paths/prints	Dock/platform
Livestock Watering	RV/ATV Tracks	Camping Sites	Fire pit/ring
NPDES Discharge	Fishing Tackle	Other:	

WBID # 706 **Site #** 4
Mark # 126 **Dissolved Oxygen (ppm)** 6.3
Upstream Views Physical Dimensions: Is there any water present at this view? yes
 If so, is there an obvious current? no

Select one of the following channel features:

	% of Channel Feature				
Riffle	27				
Run	0				
Pool	73				

Downstream View's Physical Dimensions: Is there any water present at this view? yes
 If so, is there an obvious current? no

Substrate:

59% Cobble	5% Gravel	36% Sand	% Silt
% Mud/Clay	% Bedrock		

Aquatic Vegetation: (Note amount of vegetation or algal growth at the assessment site)

none

Water Characteristics

Odor	Sewage	Musky	Chemical	<u>None</u>	Other
Color	Clear	<u>Green</u>	Gray	Milky	Other
Bottom Deposit	Sludge	Solids	Fine Sed.	<u>None</u>	Other
Surface Deposit	Oil	Scum	Foam	<u>None</u>	Other

Data Sheet C: Cross-Sectional Depth Measurements (for estimation of median depth)
(Median Depth Shown in Bold)

Site # 4

Mark # 126

WBID # 706

	Depth (m)		Depth (m)		Depth (m)
Transect 1	0.05	Transect 5	0.05	Transect 9	0.00
Substrate:	0.15	Substrate:	0.25	Substrate:	0.30
cobbly sand	0.30	cobbly sand	0.40	cobble	0.05
Water Clarity:	0.40	Water Clarity:	0.45	Water Clarity:	0.10
murky	0.50	murky	0.40	clear	0.20
Channel Feature:	0.45	Channel Feature:	0.45	Channel Feature:	0.20
pool	0.45	pool	0.35	riffle	0.10
Channel Width:	0.45	Channel Width:	0.25	Channel Width:	0.15
7 yards	0.40	9 yards	0.15	6 yards	0.00
0.40	0.10	0.30	0.05	0.13	0.15
Transect 2	0.15	Transect 6	0.10	Transect 10	0.00
Substrate:	0.25	Substrate:	0.30	Substrate:	0.00
cobbly sand	0.30	cobbly sand	0.55	cobble	0.00
Water Clarity:	0.35	Water Clarity:	0.75	Water Clarity:	0.00
murky	0.40	murky	0.95	clear	0.00
Channel Feature:	0.45	Channel Feature:	0.80	Channel Feature:	0.00
pool	0.50	pool	0.70	riffle	0.00
Channel Width:	0.45	Channel Width:	0.50	Channel Width:	0.00
11 yards	0.20	11 yards	0.25	6 yards	0.00
0.33	0.10	0.53	0.05	0.00	0.00
Transect 3	0.00	Transect 7	0.10	Transect 11	0.00
Substrate:	0.00	Substrate:	0.50	Substrate:	0.10
cobbly sand	0.05	cobbly sand	0.70	cobbly gravel	0.25
Water Clarity:	0.15	Water Clarity:	0.80	Water Clarity:	0.30
murky	0.10	murky	0.80	clear	0.25
Channel Feature:	0.15	Channel Feature:	0.75	Channel Feature:	0.15
pool	0.15	pool	0.50	riffle	0.10
Channel Width:	0.10	Channel Width:	0.25	Channel Width:	0.05
7 yards	0.15	9 yards	0.15	4 yards	0.05
0.10	0.05	0.50	0.05	0.10	0.00
Transect 4	0.00	Transect 8	0.00		
Substrate:	0.05	Substrate:	0.10	Site Median	Site Maximum
cobbly sand	0.05	cobbly sand	0.20	0.15	0.95
Water Clarity:	0.10	Water Clarity:	0.35		
murky	0.10	murky	0.65		
Channel Feature:	0.05	Channel Feature:	0.80		
pool	0.05	pool	0.50		
Channel Width:	0.05	Channel Width:	0.35		
5 yards	0.00	7 yards	0.35		
0.05	0.00	0.35	0.15		

Field Data Sheets for Recreational Use Stream Surveys
Data Sheet B - Site Characterization
(must be completed for each site)

WBID 706
 Site # 5

Date and Time: 8.31.07 12:05PM

Current Weather Conditions sunny and fair

Weather Conditions for Past 10 days: 0.88 inches of precip was the max

Drought Conditions? No

Site Location (e.g. road crossing) downstream from site #4

GPS Mark: 127

Upstream Photo 42 Downstream Photo 43

Uses Observed (Uses actually observed at time of survey) Circle

Swimming	Skin Diving	SCUBA diving	Tubing
Water Skiing	Wind Surfing	Kayaking	Boating
Wading	Rafting	Hunting	Trapping
Fishing	<u>None of the Above</u>	Other	

Surrounding Conditions

City/county parks	Playgrounds	MDC conservation lands	Urban areas
Campgrounds	Boating accesses	State parks	National Forests
Nature trails	Stairs/walkway	No trespass sign	Fence
<u>Steep slopes</u>	None of the Above	Other	

Indications of Human Use

Roads	Rope swings	Foot paths/prints	Dock/platform
Livestock Watering	RV/ATV Tracks	Camping Sites	Fire pit/ring
NPDES Discharge	Fishing Tackle	Other:	

WBID # 706 **Site #** 5
Mark # 127 **Dissolved Oxygen (ppm)** 6.9
Upstream Views Physical Dimensions: Is there any water present at this view? yes

If so, is there an obvious current? no

Select one of the following channel features:

	% of Channel Feature				
Riffle	0				
Run	100				
Pool	0				

Downstream View's Physical Dimensions: Is there any water present at this view? yes

If so, is there an obvious current? no

Substrate:

50% Cobble	% Gravel	45% Sand	% Silt
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% Mud/Clay	5% Bedrock
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Aquatic Vegetation: (Note amount of vegetation or algal growth at the assessment site)

vegetated along banks

Water Characteristics

Odor	Sewage	Musky	Chemical	<u>None</u>	Other
Color	Clear	Green	Gray	Milky	<u>Other</u> <u>brown, murky</u>
Bottom Deposit	Sludge	Solids	<u>Fine Sed.</u>	None	Other
Surface Deposit	Oil	Scum	Foam	<u>None</u>	Other

Data Sheet C: Cross-Sectional Depth Measurements (for estimation of median depth)
(Median Depth Shown in Bold)

Site # 5

Mark # 127

WBID # 706

	Depth (m)		Depth (m)		Depth (m)
Transect 1	0.05	Transect 5	0.05	Transect 9	0.10
Substrate:	0.20	Substrate:	0.15	Substrate:	0.25
cobbly sand	0.25	cobbly sand	0.10	cobbly sand	0.20
Water Clarity:	0.30	Water Clarity:	0.00	Water Clarity:	0.20
murky	0.35	clear	0.10	clear	0.15
Channel Feature:	0.35	Channel Feature:	0.10	Channel Feature:	0.20
run	0.35	run	0.10	run	0.25
Channel Width:	0.35	Channel Width:	0.15	Channel Width:	0.20
19 yards	0.35	18 yards	0.10	25 yards	0.20
0.35	0.35	0.10	0.05	0.20	0.10
Transect 2	0.10	Transect 6	0.10	Transect 10	0.05
Substrate:	0.20	Substrate:	0.20	Substrate:	0.00
cobbly sand	0.30	cobbly sand	0.05	cobbly sand	0.00
Water Clarity:	0.30	Water Clarity:	0.10	Water Clarity:	0.00
clear	0.25	clear	0.20	clear	0.00
Channel Feature:	0.20	Channel Feature:	0.25	Channel Feature:	0.10
run	0.10	run	0.15	run	0.05
Channel Width:	0.05	Channel Width:	0.10	Channel Width:	0.05
19 yards	0.00	18 yards	0.05	24 yards	0.05
0.15	0.05	0.10	0.00	0.03	0.00
Transect 3	0.25	Transect 7	0.10	Transect 11	0.05
Substrate:	0.30	Substrate:	0.20	Substrate:	0.10
cobbly sand	0.40	cobbly sand	0.25	cobbly bedrock	0.20
Water Clarity:	0.40	Water Clarity:	0.25	Water Clarity:	0.20
clear	0.40	clear	0.35	clear	0.25
Channel Feature:	0.35	Channel Feature:	0.40	Channel Feature:	0.25
run	0.25	run	0.30	run	0.45
Channel Width:	0.20	Channel Width:	0.25	Channel Width:	0.35
22 yards	0.00	22 yards	0.15	15 yards	0.20
0.28	0.05	0.25	0.05	0.20	0.00
Transect 4	0.25	Transect 8	0.05		
Substrate:	0.40	Substrate:	0.20		
cobbly sand	0.30	cobbly sand	0.30	Site Median	Site Maximum
Water Clarity:	0.20	Water Clarity:	0.35	0.20	0.45
clear	0.15	clear	0.35		
Channel Feature:	0.10	Channel Feature:	0.30		
run	0.00	run	0.30		
Channel Width:	0.00	Channel Width:	0.30		
26 yards	0.15	27 yards	0.10		
0.15	0.05	0.30	0.05		

Field Data Sheets for Recreational Use Stream Surveys
Data Sheet B - Site Characterization
(must be completed for each site)

WBID 706
 Site # 6

Date and Time: 8.31.07 1:55PM

Current Weather Conditions sunny and fair

Weather Conditions for Past 10 days: 0.88 inches of precip was the max

Drought Conditions? No

Site Location (e.g. road crossing) R.R. tracks downstream from site #5

GPS Mark: 128

Upstream Photo 45 Downstream Photo 44

Uses Observed (Uses actually observed at time of survey) Circle

Swimming	Skin Diving	SCUBA diving	Tubing
Water Skiing	Wind Surfing	Kayaking	Boating
Wading	Rafting	Hunting	Trapping
Fishing	<u>None of the Above</u>	Other	

Surrounding Conditions

City/county parks	Playgrounds	MDC conservation lands	Urban areas
Campgrounds	Boating accesses	State parks	National Forests
Nature trails	Stairs/walkway	No trespass sign	Fence
Steep slopes	<u>None of the Above</u>	Other	

Indications of Human Use

Roads	Rope swings	Foot paths/prints	Dock/platform
Livestock Watering	RV/ATV Tracks	Camping Sites	Fire pit/ring
NPDES Discharge	Fishing Tackle	<u>Other:</u>	<u>railroad tracks</u>

WBID # 706 **Site #** 6
Mark # 128 **Dissolved Oxygen (ppm)** 5.4
Upstream Views Physical Dimensions: Is there any water present at this view? yes
 If so, is there an obvious current? no

Select one of the following channel features:

	% of Channel Feature				
Riffle	0				
Run	0				
Pool	100				

Downstream View's Physical Dimensions: Is there any water present at this view? yes
 If so, is there an obvious current? no

Substrate:

50% Cobble	27% Gravel	18% Sand	5% Silt
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% Mud/Clay	% Bedrock
------------	-----------

Aquatic Vegetation: (Note amount of vegetation or algal growth at the assessment site)

none

Water Characteristics

Odor	Sewage	Musky	Chemical	<u>None</u>	Other
Color	Clear	<u>Green</u>	Gray	Milky	<u>Other</u> <u>brown</u>
Bottom Deposit	Sludge	Solids	<u>Fine Sed.</u>	None	Other
Surface Deposit	Oil	Scum	Foam	<u>None</u>	Other

Data Sheet C: Cross-Sectional Depth Measurements (for estimation of median depth)
(Median Depth Shown in Bold)

Site # 6

Mark # 128

WBID # 706

	Depth (m)		Depth (m)		Depth (m)
Transect 1	0.05	Transect 5	0.05	Transect 9	0.00
Substrate:	0.40	Substrate:	0.10	Substrate:	0.00
silt	0.65	cobbly sand	0.15	cobbly gravel	0.00
Water Clarity:	0.90	Water Clarity:	0.15	Water Clarity:	0.00
murky	0.95	clear	0.10	N/A	0.00
Channel Feature:	1.00	Channel Feature:	0.10	Channel Feature:	0.00
pool	1.00	pool	0.10	pool	0.00
Channel Width:	1.00	Channel Width:	0.50	Channel Width:	0.00
24 yards	1.00	4 yards	0.05	11 yards	0.00
0.98	1.00	0.10	0.00	0.00	0.00
Transect 2	0.05	Transect 6	0.00	Transect 10	0.05
Substrate:	0.25	Substrate:	0.00	Substrate:	0.15
gravelly sand	0.40	cobble	0.00	cobble	0.00
Water Clarity:	0.50	Water Clarity:	0.00	Water Clarity:	0.00
murky	0.70	N/A	0.00	murky	0.00
Channel Feature:	0.75	Channel Feature:	0.00	Channel Feature:	0.00
pool	1.00	pool	0.00	pool	0.00
Channel Width:	1.00	Channel Width:	0.00	Channel Width:	0.00
14 yards	1.00	10 yards	0.00	37 yards	0.00
0.73	1.00	0.00	0.00	0.00	0.00
Transect 3	0.00	Transect 7	0.05	Transect 11	0.00
Substrate:	0.05	Substrate:	0.05	Substrate:	0.10
gravelly sand	0.10	cobble	0.10	cobble	0.50
Water Clarity:	0.15	Water Clarity:	0.05	Water Clarity:	0.00
clear	0.20	clear	0.10	murky	0.00
Channel Feature:	0.20	Channel Feature:	0.20	Channel Feature:	0.00
pool	0.30	pool	0.15	pool	0.00
Channel Width:	0.25	Channel Width:	0.05	Channel Width:	0.00
15 yards	0.20	6 yards	0.05	37 yards	0.00
0.20	0.20	0.05	0.05	0.00	0.00
Transect 4	0.05	Transect 8	0.10		
Substrate:	0.01	Substrate:	0.30	Site Median	Site Maximum
gravelly sand	0.10	cobbly gravel	0.40	0.10	1.00
Water Clarity:	0.20	Water Clarity:	0.35		
clear	0.20	pool	0.35		
Channel Feature:	0.30	Channel Feature:	0.30		
pool	0.40	pool	0.30		
Channel Width:	0.30	Channel Width:	0.20		
7 yards	0.15	8 yards	0.10		
0.18	0.05	0.30	0.05		

Field Data Sheets for Recreational Use Stream Surveys
Data Sheet B - Site Characterization
(must be completed for each site)

WBID 706
 Site # 7

Date and Time: 8.31.07 2:30PM

Current Weather Conditions sunny

Weather Conditions for Past 10 days: 0.88 inches of precip was the max

Drought Conditions? No

Site Location (e.g. road crossing) Hwy 54

GPS Mark: 129

Upstream Photo 46 Downstream Photo 47

Uses Observed (Uses actually observed at time of survey) Circle

Swimming	Skin Diving	SCUBA diving	Tubing
Water Skiing	Wind Surfing	Kayaking	Boating
Wading	Rafting	Hunting	Trapping
Fishing	<u>None of the Above</u>	Other	

Surrounding Conditions

City/county parks	Playgrounds	MDC conservation lands	Urban areas
Campgrounds	Boating accesses	State parks	National Forests
Nature trails	Stairs/walkway	No trespass sign	Fence
<u>Steep slopes</u>	None of the Above	Other	

Indications of Human Use

Roads	Rope swings	Foot paths/prints	Dock/platform
Livestock Watering	RV/ATV Tracks	Camping Sites	Fire pit/ring
NPDES Discharge	Fishing Tackle	<u>Other:</u>	<u>bridge</u>

WBID # 706 **Site #** 7
Mark # 129 **Dissolved Oxygen (ppm)** 6.2
Upstream Views Physical Dimensions: Is there any water present at this view? no

If so, is there an obvious current?

Select one of the following channel features:

	% of Channel Feature				
Riffle	95				
Run	0				
Pool	5				

Downstream View's Physical Dimensions: Is there any water present at this view? no

If so, is there an obvious current?

Substrate:

50% Cobble	% Gravel	50% Sand	% Silt
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% Mud/Clay	% Bedrock
------------	-----------

Aquatic Vegetation: (Note amount of vegetation or algal growth at the assessment site)

none

Water Characteristics

Odor	Sewage	Musky	Chemical	<u>None</u>	Other
Color	Clear	<u>Green</u>	Gray	Milky	Other
Bottom Deposit	Sludge	Solids	<u>Fine Sed.</u>	None	Other
Surface Deposit	Oil	Scum	Foam	<u>None</u>	Other

Data Sheet C: Cross-Sectional Depth Measurements (for estimation of median depth)
(Median Depth Shown in Bold)

Site # 7

Mark # 129

WBID # 706

	Depth (m)		Depth (m)		Depth (m)
Transect 1	0.00	Transect 5	0.00	Transect 9	0.00
Substrate:	0.00	Substrate:	0.00	Substrate:	0.00
cobbly sand	0.00	cobbly sand	0.00	cobbly sand	0.00
Water Clarity:	0.00	Water Clarity:	0.00	Water Clarity:	0.00
N/A	0.00	N/A	0.00	N/A	0.00
Channel Feature:	0.00	Channel Feature:	0.00	Channel Feature:	0.00
riffle	0.00	riffle	0.00	riffle	0.00
Channel Width:	0.00	Channel Width:	0.00	Channel Width:	0.00
7 yards	0.00	10 yards	0.00	10 yards	0.00
0.00	0.00	0.00	0.00	0.00	0.00
Transect 2	0.00	Transect 6	0.00	Transect 10	0.00
Substrate:	0.00	Substrate:	0.00	Substrate:	0.00
cobbly sand	0.00	cobbly sand	0.00	cobbly sand	0.00
Water Clarity:	0.05	Water Clarity:	0.00	Water Clarity:	0.00
clear	0.05	N/A	0.00	N/A	0.00
Channel Feature:	0.05	Channel Feature:	0.00	Channel Feature:	0.00
pool	0.05	riffle	0.00	riffle	0.00
Channel Width:	0.05	Channel Width:	0.00	Channel Width:	0.00
8 yards	0.05	10 yards	0.00	10 yards	0.00
0.05	0.05	0.00	0.00	0.00	0.00
Transect 3	0.00	Transect 7	0.00	Transect 11	0.00
Substrate:	0.00	Substrate:	0.00	Substrate:	0.00
cobbly sand	0.00	cobbly sand	0.00	cobbly sand	0.00
Water Clarity:	0.00	Water Clarity:	0.00	Water Clarity:	0.00
N/A	0.00	N/A	0.00	N/A	0.00
Channel Feature:	0.00	Channel Feature:	0.00	Channel Feature:	0.00
riffle	0.00	riffle	0.00	riffle	0.00
Channel Width:	0.00	Channel Width:	0.00	Channel Width:	0.00
9 yards	0.00	10 yards	0.00	10 yards	0.00
0.00	0.00	0.00	0.00	0.00	0.00
Transect 4	0.00	Transect 8	0.00	Site Median	Site Maximum
Substrate:	0.00	Substrate:	0.00	0.00	0.05
cobbly sand	0.00	cobbly sand	0.00		
Water Clarity:	0.00	Water Clarity:	0.00		
N/A	0.00	N/A	0.00		
Channel Feature:	0.00	Channel Feature:	0.00		
riffle	0.00	riffle	0.00		
Channel Width:	0.00	Channel Width:	0.00		
10 yards	0.00	10 yards	0.00		
0.00	0.00	0.00	0.00		

Field Data Sheets for Recreational Use Stream Surveys
Data Sheet B - Site Characterization
(must be completed for each site)

WBID 706
 Site # 8

Date and Time: 8.31.07 3:27

Current Weather Conditions sunny

Weather Conditions for Past 10 days: 0.88 inches of precip was the max

Drought Conditions? No

Site Location (e.g. road crossing) CR 156

GPS Mark: 130

Upstream Photo 48 Downstream Photo 49

Uses Observed (Uses actually observed at time of survey) Circle

Swimming	Skin Diving	SCUBA diving	Tubing
Water Skiing	Wind Surfing	Kayaking	Boating
Wading	Rafting	Hunting	Trapping
Fishing	<u>None of the Above</u>	Other	

Surrounding Conditions

City/county parks	Playgrounds	MDC conservation lands	Urban areas
Campgrounds	Boating accesses	State parks	National Forests
Nature trails	Stairs/walkway	No trespass sign	Fence
<u>Steep slopes</u>	None of the Above	Other	

Indications of Human Use

Roads	Rope swings	Foot paths/prints	Dock/platform
Livestock Watering	RV/ATV Tracks	Camping Sites	Fire pit/ring
NPDES Discharge	Fishing Tackle	Other:	

WBID #	706	Site #	8
Mark #	130	Dissolved Oxygen (ppm)	4.7
Upstream Views	Physical Dimensions: Is there any water present at this view? yes		

If so, is there an obvious current? no

Select one of the following channel features:

% of Channel Feature

	% of Channel Volume				
Riffle	0				
Run	100				
Pool	0				

Downstream View's Physical Dimensions: Is there any water present at this view? yes

If so, is there an obvious current? no

Substrate:

55% Cobble	% Gravel	27% Sand	18% Silt
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% Mud/Clay	% Bedrock
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Aquatic Vegetation: (Note amount of vegetation or algal growth at the assessment site)

none

Water Characteristics

Odor	Sewage	Musky	Chemical	<u>None</u>	Other
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Color Clear **Green** Gray Milky **Other**

Bottom Deposit	Sludge	Solids	<i>Fine Sed.</i>	None	Other
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Surface Deposit	Oil	Scum	Foam	None	Other
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Data Sheet C: Cross-Sectional Depth Measurements (for estimation of median depth)
(Median Depth Shown in Bold)

Site # 8

Mark # 130

WBID # 706

	Depth (m)		Depth (m)		Depth (m)
Transect 1	0.05	Transect 5	0.10	Transect 9	0.15
Substrate:	0.20	Substrate:	0.20	Substrate:	0.40
cobbly sand	0.25	cobbly silt	0.45	cobble	0.45
Water Clarity:	0.25	Water Clarity:	0.55	Water Clarity:	0.60
clear	0.25	clear	0.55	clear	0.75
Channel Feature:	0.25	Channel Feature:	0.50	Channel Feature:	0.95
run	0.25	run	0.60	run	1.00
Channel Width:	0.25	Channel Width:	0.55	Channel Width:	0.95
15 yards	0.25	21 yards	0.40	22 yards	0.90
0.25	0.10	0.48	0.20	0.68	0.55
Transect 2	0.05	Transect 6	0.35	Transect 10	0.35
Substrate:	0.15	Substrate:	0.70	Substrate:	0.55
cobbly sand	0.25	cobbly silt	0.60	cobbly sand	0.95
Water Clarity:	0.25	Water Clarity:	0.65	Water Clarity:	1.00
clear	0.30	clear	0.70	clear	0.95
Channel Feature:	0.25	Channel Feature:	0.60	Channel Feature:	0.85
run	0.35	run	0.55	run	0.75
Channel Width:	0.40	Channel Width:	0.40	Channel Width:	0.70
15 yards	0.30	18 yards	0.30	22 yards	0.40
0.25	0.05	0.58	0.10	0.73	0.15
Transect 3	0.00	Transect 7	0.25	Transect 11	0.10
Substrate:	0.15	Substrate:	0.40	Substrate:	0.20
cobbly sand	0.20	cobbly silt	0.65	cobbly sand	0.35
Water Clarity:	0.15	Water Clarity:	0.70	Water Clarity:	0.55
clear	0.20	clear	0.75	clear	0.70
Channel Feature:	0.25	Channel Feature:	0.60	Channel Feature:	1.00
run	0.30	run	0.50	run	1.00
Channel Width:	0.35	Channel Width:	0.50	Channel Width:	1.00
18 yards	0.30	17 yards	0.45	17 yards	1.00
0.20	0.10	0.50	0.15	0.85	1.00
Transect 4	0.55	Transect 8	0.65		
Substrate:	0.40	Substrate:	0.75	Site Median	Site Maximum
cobbly sand	0.40	cobbly silt	0.75	0.40	1.00
Water Clarity:	0.45	Water Clarity:	0.70		
clear	0.40	clear	0.80		
Channel Feature:	0.30	Channel Feature:	0.45		
run	0.25	run	0.60		
Channel Width:	0.20	Channel Width:	0.40		
18 yards	0.35	15 yards	0.35		
0.38	0.05	0.63	0.10		

Field Data Sheets for Recreational Use Stream Surveys
Data Sheet B - Site Characterization
(must be completed for each site)

WBID 706
 Site # 9

Date and Time: 8.31.07

Current Weather Conditions sunny

Weather Conditions for Past 10 days: 0.88 inches of precip was the max

Drought Conditions? No

Site Location (e.g. road crossing) I-70

GPS Mark: 131

Upstream Photo 50 Downstream Photo 51

Uses Observed (Uses actually observed at time of survey) Circle

Swimming	Skin Diving	SCUBA diving	Tubing
Water Skiing	Wind Surfing	Kayaking	Boating
Wading	Rafting	Hunting	Trapping
Fishing	<u>None of the Above</u>	Other	

Surrounding Conditions

City/county parks	Playgrounds	MDC conservation lands	Urban areas
Campgrounds	Boating accesses	State parks	National Forests
Nature trails	Stairs/walkway	No trespass sign	Fence
<u>Steep slopes</u>	None of the Above	Other	

Indications of Human Use

Roads	Rope swings	Foot paths/prints	Dock/platform
Livestock Watering	RV/ATV Tracks	Camping Sites	Fire pit/ring
NPDES Discharge	Fishing Tackle	Other:	

WBID # 706 **Site #** 9
Mark # 131 **Dissolved Oxygen (ppm)** 7.6
Upstream Views Physical Dimensions: Is there any water present at this view? yes
 If so, is there an obvious current? no

Select one of the following channel features:

	% of Channel Feature				
Riffle	0				
Run	100				
Pool	0				

Downstream View's Physical Dimensions: Is there any water present at this view? yes
 If so, is there an obvious current? no

Substrate:

55% Cobble	9% Gravel	32% Sand	4% Silt
% Mud/Clay	% Bedrock		

Aquatic Vegetation: (Note amount of vegetation or algal growth at the assessment site)

none

Water Characteristics

Odor	Sewage	Musky	Chemical	<u>None</u>	Other
Color	Clear	<u>Green</u>	Gray	Milky	<u>Other</u>
Bottom Deposit	Sludge	Solids	Fine Sed.	None	Other
Surface Deposit	Oil	Scum	Foam	<u>None</u>	Other

Data Sheet C: Cross-Sectional Depth Measurements (for estimation of median depth)
(Median Depth Shown in Bold)

Site # 9

Mark # 131

WBID # 706

	Depth (m)		Depth (m)		Depth (m)
Transect 1	0.05	Transect 5	0.20	Transect 9	0.05
Substrate:	0.10	Substrate:	0.50	Substrate:	0.35
cobble	0.20	cobbly silt	0.60	cobbly sand	0.40
Water Clarity:	0.35	Water Clarity:	0.65	Water Clarity:	0.45
murky	0.50	murky	0.65	murky	0.45
Channel Feature:	0.60	Channel Feature:	0.70	Channel Feature:	0.40
run	0.55	run	0.55	run	0.25
Channel Width:	0.56	Channel Width:	0.40	Channel Width:	0.20
17 yards	0.40	24 yards	0.30	17 yards	0.10
0.38	0.25	0.53	0.10	0.30	0.05
Transect 2	0.40	Transect 6	0.20	Transect 10	0.15
Substrate:	0.55	Substrate:	0.50	Substrate:	0.35
cobble	0.65	cobbly sand	0.60	gravelly sand	0.40
Water Clarity:	0.50	Water Clarity:	0.65	Water Clarity:	0.45
murky	0.50	murky	0.50	murky	0.30
Channel Feature:	0.40	Channel Feature:	0.40	Channel Feature:	0.22
run	0.45	run	0.35	run	0.20
Channel Width:	0.40	Channel Width:	0.30	Channel Width:	0.15
17 yards	0.30	32 yards	0.25	29 yards	0.20
0.43	0.05	0.38	0.05	0.21	0.00
Transect 3	0.05	Transect 7	0.10	Transect 11	0.05
Substrate:	0.40	Substrate:	0.30	Substrate:	0.10
cobble	0.50	cobbly sand	0.40	gravelly sand	0.15
Water Clarity:	0.45	Water Clarity:	0.45	Water Clarity:	0.20
murky	0.55	murky	0.50	murky	0.20
Channel Feature:	0.60	Channel Feature:	0.50	Channel Feature:	0.20
run	0.45	run	0.40	run	0.20
Channel Width:	0.35	Channel Width:	0.35	Channel Width:	0.10
18 yards	0.20	34 yards	0.25	15 yards	0.00
0.43	0.15	0.38	0.10	0.13	0.05
Transect 4	0.15	Transect 8	0.20		
Substrate:	0.40	Substrate:	0.35	Site Median	Site Maximum
cobbly sand	0.45	cobbly sand	0.40	0.35	0.70
Water Clarity:	0.45	Water Clarity:	0.40		
murky	0.50	murky	0.35		
Channel Feature:	0.05	Channel Feature:	0.40		
run	0.35	run	0.30		
Channel Width:	0.25	Channel Width:	0.22		
24 yards	0.20	29 yards	0.15		
0.30	0.00	0.32	0.05		

WBID# 0706



Site# 1 Photo ID# 33, Upstream



Site# 1 Photo ID# 34, Downstream



Site# 2 Photo ID# 35, Upstream



Site# 2 Photo ID# 36, Downstream

WBID# 0706



Site# 3 Photo ID# 37, Livestock watering



Site# 3 Photo ID# 38, Upstream



Site# 3 Photo ID# 39, Downstream



Site# 4 Photo ID# 40, Upstream

WBID# 0706



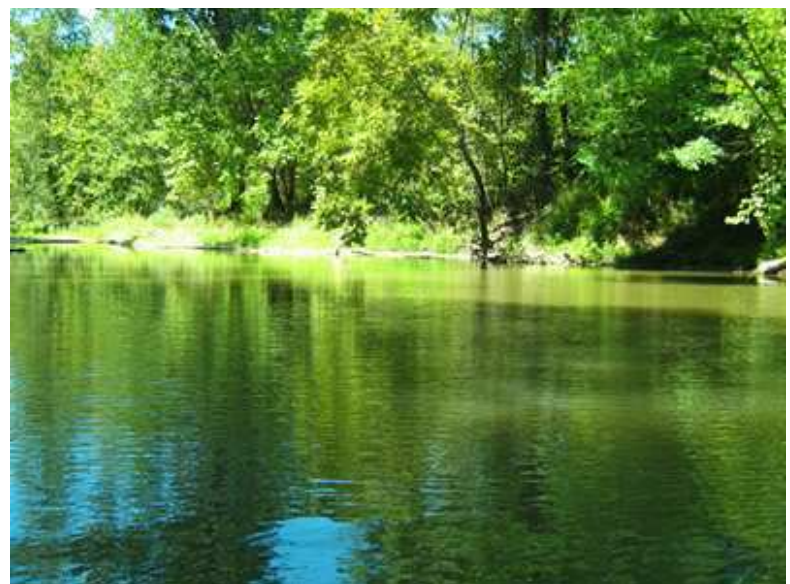
Site# 4 Photo ID# 41, Downstream



Site# 5 Photo ID# 42, Upstream



Site# 5 Photo ID# 43, Downstream



Site# 6 Photo ID# 45, Upstream

WBID# 0706



Site# 6 Photo ID# 44, Downstream



Site# 7 Photo ID# 46, Upstream



Site# 7 Photo ID# 47, Downstream



Site# 8 Photo ID# 48, Upstream

WBID# 0706



Site# 8 Photo ID# 49, Downstream



Site# 9 Photo ID# 50, Upstream



Site# 9 Photo ID# 51, Downstream